



## **Common Core State Standards Issues and Recommendations for Gifted Education Professionals**

The adoption of the Common Core State Standards (CCSS) in almost every state is cause for gifted education as a field to reflect on its role in supporting gifted and high-potential learners appropriately in the content areas. As a field, we have not always differentiated systematically in the core domains of learning, but rather focused on interdisciplinary concepts, higher-level skills, and problem-solving, typically across domains. With the new CCSS, it becomes critical for us to show how we are differentiating for gifted learners within a set of standards that are reasonably rigorous in each subject area.

It has been stated by some that the CCSS core does not require any special differentiation for the gifted, and may obviate the need for gifted education services since the standards are already high level. Unfortunately, although the Standards are strong, they are not sufficiently advanced to accommodate the needs of most gifted learners. As the CCSS developers have noted, some students will traverse the Standards before the end of high school, which will require educators to provide advanced content for them. Beyond accelerative methods, however, there is also a need to enrich the standards by ensuring that there are open-ended opportunities to meet the standards through multiple pathways, more complex thinking applications, and real world problem-solving contexts. This requires a deliberate strategy among gifted educators to ensure that the CCSS are translated in a way that allows for differentiated practices to be employed with gifted and high-potential students.

As with all standards, new assessments likely will drive the instructional process. As a field, we must be aware of the need to differentiate new assessments that align with the CCSS as well. Gifted learners will need to be assessed through performance-based and portfolio techniques that are based on higher-level learning outcomes than the new CCSS may employ.

While the new CCSS are a positive movement for all of education, it is important to be mindful of the ongoing need to differentiate appropriately for our top learners within them. As a field, it is also critical that we agree on the need to align with this work so our voices are at the table as the CCSS become one important basis, along with the newly revised [InTASC Model Teacher Standards](#), for elevating teacher quality and student learning nationwide.

Below are frequently asked questions and answers about the Common Core State Standards and their relationship to gifted and talented and high-potential learners.

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## What are the Common Core State Standards?

The Common Core State Standards (CCSS) are K-12 content standards, developed in Mathematics and English Language Arts, to illustrate the curriculum emphases needed for students to develop the skills and concepts required for the 21<sup>st</sup> century. Adopted by 44 states to date, the CCSS are organized into key content strands and articulated across all years of schooling and in most cases replace the existing state content standards. By the academic year 2012-2013, science standards will be released as well. The initiative has been state-based and coordinated by the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO). Designed by teachers, administrators, and content experts, the CCSS are intended to prepare K-12 students for college and the workplace.

The new CCSS are evidence-based, aligned with expectations for success in college and the work place, and informed by the successes and failures of the current standards and international competition demands. The new standards stress rigor, depth, clarity, and coherence, drawing from the National Assessment of Educational Progress (NAEP) Frameworks in Reading and Writing and the Trends in International and Science Study (TIMSS) report in Mathematics. They provide a framework for curriculum development work, which remains to be done although many states are already engaged in the process. States like Indiana, Minnesota, Illinois, and Maine are working within and across local districts to design relevant curriculum and to align current practice to the new standards.

## Definitions of key terms

*Acceleration* is a broad term used to describe ways in which gifted student learning may occur at a faster more appropriate rate throughout the years of schooling. It refers to content acceleration through compacting and reorganizing curriculum by unit or year, grade skipping, telescoping two years into one, dual enrollment in high school and college or university, as well as more personalized approaches such as tutorials and mentorships that also would be sensitive to the advanced starting level of these learners for instruction. Both Advanced Placement (AP) and International Baccalaureate at the high school level represent programs of study already accelerated in content. AP courses also may be taken on a fast track schedule earlier as appropriate

*Assessment* is the way to determine the scope and degree of learning that has been internalized by the student. For purposes of gifted education, the assessments must be matched to differentiated outcomes, requiring the use of authentic approaches like performance-based and portfolio-based assessment demands. Some assessments are already constructed and available for use, exhibiting strong technical adequacy and employed in research studies while others may be teacher-developed, with opportunities to establish interrater reliability among teachers who may be using them in schools.

*Characteristics and needs of gifted learners* is the basis for differentiating any curriculum area. In Language Arts, verbally talented students learn to read early, talk in complex sentences, write coherent text, and become sensitive to language at an earlier stage of development than typical learners do. Because of this advanced readiness to engage with their world, their curriculum diet should be advanced, rich in experiences for increasing complexity and depth, and open-ended to allow for creative manipulation of ideas and concepts. In Mathematics, mathematically precocious learners learn their number facts early, can perform computational operations before they are taught in school, have a sensitivity to patterns, and love to engage in problem-solving through puzzles and games. Because of this advanced readiness, these students need to be accelerated through the basic material in Mathematics in order to focus on higher level math concepts and problems.

*Curriculum* is a set of planned learning experiences, delineated from a framework of expectations at the goal or outcome level that represent important knowledge, skills, and concepts to be learned. Differentiated curriculum units of study already have been designed and tested for effectiveness in both Language Arts and Mathematics or units may be developed by teachers to use in gifted instruction.

*Differentiation of curriculum* for gifted learners is the process of adapting and modifying curriculum structures to address these characteristics and needs more optimally. Thus curriculum goals, outcomes, and activities may be tailored for gifted learners to accommodate their needs. Typically, this process involves the use of the strategies of acceleration, complexity, depth, and creativity in combination.

*Instruction* is the delivery system for teaching that comprises the deliberate use of models, strategies, and supportive management techniques. For gifted learners, inquiry strategies such as problem-based learning and creative problem-solving, and critical-thinking models such as Paul's reasoning model, used in a flexible grouping approach in the regular classroom constitutes instructional differentiation.

*Teacher Quality* refers to the movement at all levels of education to improve the knowledge base and skills of classroom teachers at P-12 levels, which is necessary for effective instruction for advanced students. It is the basis for a redesign of teacher education standards and a rationale for examining P-12 student outcomes in judging the efficacy of higher education programs for teachers. Policy makers are committed to this issue in improving our P-16 education programs.

## Common Core State Standards and Gifted Education

### How do the Common Core State Standards relate to programs for the gifted?

The adoption of the Common Core State Standards (CCSS) will have significant implications for teachers. The CCSS call for general education teachers to recognize and address student learning differences, and incorporate rigorous content and application of knowledge through higher-order thinking skills. Despite the obvious connection to the field of gifted education, the nature of advanced work beyond the CCSS is not addressed. In fact, the authors of the CCSS state, "The Standards do not define the nature of advanced work for students who meet the Standards prior to the end of high school" ([English Language Arts Standards](#), p. 6).

In addition, it will become increasingly more important for gifted education coordinators, facilitators, and teachers to reaffirm and advocate for the need for specialized services for academically advanced and high-potential students. Beyond providing direct student services, gifted education professionals play an important role in the translation of the CCSS to the classroom by collaborating with other teachers and serving as a valuable resource for *implementing differentiated curriculum and assessment*. Gifted education professionals may also need to expand their role and act as a mentor/peer coach in providing sustained, job-embedded professional development to school personnel to ease implementation issues. Moreover, the research base from gifted education can contribute to the professional development that school administrators may need to support complex curriculum and deep student learning.

### How do we align the Common Core State Standards to gifted education programming standards?

All differentiation is based on an understanding of the characteristics of gifted and high-potential students *and* the content standards within a domain. The new Common Core State Standards (CCSS) require the field of gifted education to examine its practices and align them more fully to the [NAGC Pre-K-Grade 12 Gifted Programming Standards](#) for curriculum, instruction, and assessment. Since the gifted programming standards in curriculum require us to engage in two major tasks in curriculum planning—alignment to standards in the content areas and the development of a scope and sequence—using the CCSS is a natural point of departure. The effort must occur in vertical planning teams within districts and states in order to ensure consistency and coherence in the process. There are three major strategies that may be employed to accomplish the task for gifted education:

1. Provide pathways to accelerate the CCSS for gifted learners.

Some of the CCSS address higher-level skills and concepts that should receive focus throughout the years of schooling, such as a major emphasis on the skills of argument in English Language Arts and the skills of patterning and problem-solving in Mathematics. However, there are also more discrete skills that may be clustered across grade levels and compressed around higher-level skills and concepts for more efficient mastery by gifted students.

2. Provide examples of differentiated task demands to address specific standards.

Standards like the research standard in English Language Arts and the data interpretation standard in Mathematics lend themselves to differentiated interpretation through demonstrating what a typical learner on grade level might be able to do at a given stage of development versus what a gifted learner might be able to do. The differentiated examples should show greater complexity and

creativity, using a more advanced curriculum base. While typical learners might interpret a grade-level graph to satisfy the data interpretation standard in Mathematics, the gifted learners might use real world and multiple data sets to interpret and show trends in data over time. In English Language Arts, while typical learners might learn the parts of speech and practice their application across grades K-8, gifted learners might instead explore the relationship of these parts of speech and their function in different sentence patterns at an earlier stage of development. Other degrees of differentiation may take place by adding complexity to the task and using enrichment techniques that address student needs and district demographics.

3. Create interdisciplinary product demands to elevate learning for gifted students and to efficiently address multiple standards at once.

Since English Language Arts and Mathematics standards can be grouped together in application, much of the project work that gifted educators might already use could be revised to connect to the new CCSS and show how multiple standards could be addressed across content areas. For example, research projects could be designed that address the research standard in English Language Arts and the data representation standard in Mathematics by delineating a product demand for research on an issue, asking researchable questions, using multiple sources to answer them, and then representing findings in tables, graphs, and other visual displays that are explained in text and presented to an audience with implications for a plan of action. Such a project might be possible for the gifted learner at an earlier grade than for a typical learner.

<b>In what ways does the Common Core State Standards implementation relate to various program models in gifted education?</b>
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As gifted program service models vary, so do the implementation implications for the Common Core State Standards (CCSS). Gifted students receive services within heterogeneous settings, cluster-grouped classrooms, pull-out models, and self-contained classrooms.

For teachers of gifted and high-potential learners served in the heterogeneous, general education classroom with flexible grouping, the CCSS can serve as benchmarks for what all students should know, though educators should be careful not to limit curriculum for high-ability students based on the foundational expectations that would be provided to general education learners. In fact, those who are advanced, as is noted in the introduction to the CCSS, may show mastery of content standards much sooner than other learners. As the CCSS authors acknowledge the limited nature of the standards in addressing the needs of the gifted, teachers must then modify learning experiences for these students.

To address the curricular needs of gifted and high-potential students, teachers can differentiate curriculum through posing progressively more complex issues, adjustment of texts according to each student's reading level and interest, modification of mathematical processes according to those previously mastered, and pace of instruction. While the CCSS provide indicators of general levels of performance for all students, teachers will need to modify learning so that gifted learners are provided appropriately challenging, stimulating experiences throughout the instructional day for continued progress.

In cluster-grouped classrooms, teachers can use the CCSS as a basis for preassessment of where students are performing, and adjust grouping according to students' abilities, interests, and strengths with respect to literacy or Mathematics. Teachers can group high-ability students flexibly throughout the school day to allow students the opportunity to regularly engage with peers of similar abilities and interests according to individual literacy or mathematical skills addressed in the CCSS (such as speaking or reading and writing) or by a combination of skills.

Teachers who serve gifted students in pull-out models, where gifted students spend a portion of their school day (or week) in a setting other than their general education classroom, are encouraged to consider how their infusion of literacy and numeracy address the CCSS and how the experiences offered in the pull-out setting offer advanced learning experiences beyond those that would be provided in the general education classroom. Teachers of the gifted in pull-out classrooms are encouraged to remain informed of the content and scope of literacy experiences afforded students in the regular classroom setting so that gifted program experiences provide opportunities for greater depth, complexity, critical-thinking opportunities, creative production, and research based on the individual needs of gifted students as reflected in the use of ongoing assessment information.

Gifted students who are served throughout the school day with gifted peers in self-contained classrooms engage in a range of literacy experiences as different content areas are addressed. Teachers of the gifted in these classrooms use the CCSS as developmental guidelines for grade-level expectations for all students, though gifted learners with advanced skills in literacy and numeracy often evidence proficiency early in the school year or acquire these foundational skills at a pace that is faster than general education peers or even their gifted education peers. Thus, appropriate grouping within the self-contained classroom is recommended according to literacy and numeracy abilities. The curriculum should be qualitatively different from the curriculum offered to general education students according to the needs of students in terms of rate of learning, depth of content, difficulty of products, and complexity of thinking processes.

The models of delivery are largely not addressed in the CCSS, allowing teachers and schools to implement services based on the needs of gifted students with the CCSS as a basis. Though gifted program design and delivery will be informed by these Standards, programs and services for the gifted should be largely guided by assessment data on the ability levels of students as well as best practices for serving gifted students in each of the core subject areas.

## Differentiating the Common Core for Gifted and High-Potential Students

### What are the approaches to use in differentiating the English Language Arts standards?

[Common Core State Standards in English Language Arts](#) (ELA) identify K-12 grade-level literacy performance expectations in reading, writing, speaking, listening, and language, with specific benchmarks by grade for developmental progress. The ELA standards were designed to prepare students to become critical consumers of literature and informational texts across disciplines and are primarily framed as developmental processes that these students would be able to demonstrate by the end of a given grade level of instruction. As is noted in the [ELA standards' preamble](#), the curriculum, instruction, and scope of learning is not prescribed; educators are given great latitude in how to obtain these achievement goals and in which learning goals to infuse into the curriculum or instruction.

Guided by assessment data, the ELA standards suggest that teachers are responsible for tailoring learning experiences for gifted students to foster the continued development of advanced skills, knowledge, and conceptual understanding. Instructional approaches in reading, for example, could include matching gifted readers with texts that are commensurate or slightly above their documented reading level. Gifted and high-potential readers may also benefit from other instructional approaches recognized as beneficial for advanced readers, such as Socratic Seminars and literature circles. In line with the ELA standards' recommendations, to promote students' continued development of research skills, teachers of the gifted may also infuse opportunities for research in students' areas of interests as well as creative production. Teachers of gifted writers may encourage the development of advanced writing skills through writing competitions, production in public venues, or staging of a student's original writing through drama, poetry readings, mentorships with local writers or other writing experts, or in-class response groups comprised of classmates with similar advanced writing abilities. Teachers of gifted and high-potential students also should be mindful of the importance of providing conceptual units of study that foster interdisciplinary thinking, examination of complex issues, problem finding, and problem solving to stimulate discussion, debate, reasoning, and related skills of persuasion, which are progressively targeted as learners move from K-6 through secondary education.

Instructional pace is also a critical consideration in the education of gifted students. As noted in the Common Core State Standards document, advanced learners may demonstrate rapid or early mastery of the Standards. Depending on an individual student's rate of learning, which might differ depending on the ELA areas in which a student excels, curriculum should be made more advanced and challenging in that area. For example, a student who enters kindergarten reading at the second-grade level should receive instruction pitched at third-grade books and materials with matching comprehension questions and writing assignments. Teachers are responsible for monitoring the pace at which a gifted learner responds and adjusting pacing appropriately.

## What are the approaches to use in differentiating the Mathematics standards?

The [Common Core State Standards \(CCSS\) in Mathematics](#) have significant implications for the teaching of Mathematics in grades K–12. Our collective future lies in the individual development of students with mathematical promise, students who will fulfill their own potential and also provide leadership for others. This individualized developmental approach includes students who traditionally have been identified as gifted, talented, advanced, or precocious in Mathematics as well as those students with potential who may have been excluded from the rich opportunities that might accompany this recognition. As with all students, these students with special needs deserve a least restrictive learning environment that lifts the ceiling, fuels their creativity and passions, pushes them to make continuous progress throughout their academic careers, and supports them in the fulfillment of their personal potential.

When considering the implications of the CCSS for the development of mathematical talent, it is important to take into account the eight [Standards for Mathematical Practice](#) that educators should seek to develop in their students as well as the individual Mathematics content standards. For example, the Standards for Practice expect proficient students to reason abstractly and quantitatively, persevere in solving difficult problems, and construct and critique viable arguments to support their reasoning. Students need a chance to experience the joy of investigating rich concepts in depth and applying innovative mathematical reasoning and justification to a variety of scientific, engineering, and other problems.

The instructional pace is also a critical consideration in the education of gifted students in Mathematics. The CCSS document suggests that advanced learners may demonstrate rapid or early mastery of the Mathematics standards, requiring accelerative opportunities at key stages of development.

Teachers of the gifted also should be mindful of the importance of providing problem finding and problem-solving skills and strategies to stimulate mathematical reasoning, spatial reasoning, and work with number theory. As applied skills to conducting meaningful research, early exposure of gifted learners of probability, statistics, and logic are viable approaches to be used.

## How do we differentiate assessments based on the Common Core State Assessments?

Though end-of-grade performance expectations are identified in the Common Core State Standards (CCSS), teachers must also consider how differentiation of classroom assessments can be tailored to support the ongoing development of each student's literacy and numeracy), in order to meet gifted students' unique academic and social-emotional needs.

For example, in English Language Arts (ELA), curriculum may be modified with more advanced content (more difficult material, greater depth of exploration), more challenging readings (increased in alignment with students' reading levels), and projects that challenge students to stretch beyond their current level of performance through assessments that appropriately gauge the growth of the advanced learner. With the ELA standards' inclusion of literacy development across subject areas, ample opportunities for interdisciplinary and interest-driven learning are possible but require careful instructional design so that gifted students are afforded learning geared to their continued development as assessed regularly by the classroom teacher. Thus product-based assessment is a crucial approach in this process.

Similarly, students with potential in Mathematics should experience rigorous Mathematics courses through a carefully constructed, compacted and telescoped curriculum. This requires the use of preassessments and ongoing assessments to ensure that the knowledge and skills are matched to the student's current level of achievement and that above grade-level curriculum is provided for acceleration. Information about possible accelerated pathways for advanced high school students can be found in Appendix A of the CCSS for Mathematics. (See <http://www.corestandards.org/> for additional information.)

NOTE: Federal Race-to-the-Top Assessments grants were awarded to two consortia of states that are developing vertically aligned state end-of-year assessments based on the CCSS that will provide both summative and formative assessment information. Forty-four states belong to one or both of the consortia, whose assessments are now being piloted and are expected to be in use in 2014. For more information about the work of the consortia, visit [Smarter Balanced Consortium](#) and the [PARCC Consortium](#).

## What is the research support for differentiating the Common Core State Standards for gifted learners?

Evidence-based practices that inform the teacher preparation and programming standards in gifted education relate to assessment, curriculum, instruction, and grouping issues, all of which are embedded within the Common Core State Standards (CCSS). These practices have an extensive research base. Click here for the [complete references](#) for the citations below.

### *Assessment of Individual Characteristics and Needs*

- Because of their advanced cognitive functioning, internal locus of control, motivation, and talents, teachers need to provide intellectual challenge in their classrooms to gifted and talented students (Ablard & Tissot, 1998; Barnett & Durden, 1993; Carter, 1985; Gross, 2000; McLaughlin & Saccuzzo, 1997; Robinson & Clinkenbeard, 1998; Swiatek, 1993).
- Educators also must be receptive to gifted students' affective needs and sensitive to the socio-emotional and coping needs of special groups of learners (e.g., highly gifted, gifted students with disabilities, gifted students from diverse backgrounds, gifted girls, gifted boys) (Albert & Runco, 1989; Ford & Harris, 2000; Coleman, 2001; Cross, Stewart, & Coleman, 2003; Gross, 2003; Kennedy, 1995; Peterson, 2003; Shaunessy & Self, 1998; Swiatek & Dorr).
- Gifted students' cultural, linguistic, and intellectual differences should be considered when planning instruction and differentiating curriculum (Boothe & Stanley, 2004).
- Educators need to use preassessment and ongoing assessment to adjust instruction that is consistent with the individual student's progress (Reis, Burns, & Renzulli, 1992; Winebrenner, 2003).
- Assessments used to document academic growth include authentic tasks, portfolios, and rubrics and performance-based assessments (Siegle, 2002; Treffinger, 1994; VanTassel-Baska, 2002).
- The results of progress assessments can be used to adjust instruction including placement in appropriate group learning settings and academic acceleration (Feldhusen, 1996; Kulik, 1992).

### *Instruction*

- Teachers need to use metacognitive and higher-level thinking strategies in the content areas, activities that address the gifted students' areas of interest, and foster research skills (Anderson & Krathwohl, 2001; Center for Gifted Education, 2000; Elder & Paul, 2003; Hébert, 1993; Johnsen & Goree, 2005; Moon, Feldhusen, & Dillon, 1994; VanTassel-Baska, Avery, Little, & Hughes, 2000).
- Educators should develop gifted students' use of cognitive strategies and encourage deliberate training in specific talent areas (Bloom & Sosniak, 1981; Ericsson & Charness, 1994; Feldman, 2003).
- Technology can be used in independent studies to access mentors and electronic resources and to enroll in advanced classes (Cross, 2004; Ravaglia, Suppes, Stillingner, & Alper, 1995; Siegle, 2004).

### *Curriculum*

- In the classroom, curricular modifications for gifted students include acceleration, enrichment, grouping, problem-based learning, curriculum compacting, tiered lessons, independent study, and specific curriculum models (Brody, 2004; Betts & Neihart, 1986; Colangelo, Assouline, & Gross, 2004; Gallagher & Stepien, 1996; Gentry, 1999; Johnsen & Goree, 2005; Kulik & Kulik, 1992; Milgram, Hong, Shavit, & Peled, 1997; Renzulli & Reis, 2004; Rogers, 2003; Southern & Jones, 1991; Tomlinson, 2002; Tomlinson, Kaplan, Renzulli, Burns, Leppien, & Purcell, 2001; VanTassel-Baska & Little, 2003).
- Models emphasize the need for considering students' interests, environmental and natural catalysts, curriculum differentiation, and the development of higher-level thinking skills (Elder & Paul, 2003; Gagné, 1995; Renzulli & Reis, 2003; Tomlinson & Cunningham-Eidson, 2003).
- When designing a differentiated curriculum, it is essential to develop a scope and sequence and align national, state or provincial, and/or local curricular standards with the differentiated curriculum (Maker, 2004; VanTassel-Baska & Johnsen, 2007; VanTassel-Baska & Stambaugh, 2006).
- Specific curricula have been designed for gifted students and include affective education, leadership, domain-specific studies, and the arts (Clark & Zimmerman, 1997; Nugent, 2005; Parker & Begnaud, 2003; VanTassel-Baska, 2003a).
- Educators should integrate academic and career guidance into learning plans for gifted students, particularly those from diverse backgrounds (Cline & Schwartz, 2000; Ford & Harris, 1997).

- Differentiated curricula results in increased student engagement, enhanced reasoning skills, and improved habits of mind (VanTassel-Baska, Avery, Little, & Hughes, 2000).
- When individuals from diverse backgrounds are provided challenging curricula, their abilities and potential are more likely to be recognized (Ford, 1996; Ford & Harris III, 1997; Mills, Stork, & Krug, 1992).

#### *Environment*

- Working in groups with other gifted students and mentors can yield academic benefits and enhance self-confidence and communication skills (Brody, 1999; Davalos, & Haensly, 1997; Grybe, 1997; Pleiss & Feldhusen, 1995; Torrance, 1984).
- Working under a successful mentor in their area of interest can foster personal growth, leadership skills, and high levels of learning (Betts, 2004; Brody, 1999; Davalos, & Haensly, 1997; Feldhusen & Kennedy, 1988; Grybe, 1997; Pleiss & Feldhusen, 1995; Torrance, 1984).
- Other learning situations that support self-efficacy, creativity, and life-long learning include early college entrance programs, talent searches, competitions, problem-based learning, independent play, independent study, and the International Baccalaureate Program (Betts, 2004; Boothe, Sethna, Stanley, & Colgate, 1999; Christophersen & Mortweet, 2003; Gallagher, 1997; Johnsen & Goree, 2005; Rotigel & Lupkowski-Shopluk, 1999; Olszewski-Kubilius, 1998; Poelzer & Feldhusen, 1997; Riley & Karnes, 1998).
- Three factors need to be present for students to develop their talents: (a) above-average ability and motivation; (b) school, community, and/or family support; and (c) acceptance by peers in the domain of talent (Bloom, 1985; Csikszentmihalyi, 1996; Gagne, 2003; Renzulli, 1994; Siegle & McCoach, 2005).

## Professional Development Implications for Gifted Education Professionals

### **What are the professional development implications for implementing the Common Core State Standards?**

Professional development is essential for all educators, who ideally are engaged in learning communities to identify specific knowledge and skills needed to serve different groups of learners. As schools and school districts adopt and begin using the Common Core State Standards (CCSS), all educators should be involved in ongoing learning to address the needs of gifted and high-potential students. Specifically, all educators need a repertoire of research-supported strategies to deliberately adapt and modify curriculum, instruction, and assessment within the framework of the CCSS, based on the needs of gifted and talented students as well as those with high potential.

While the CCSS provide the framework for the learning experiences for all students, gifted educators need focused training that is content-specific for differentiating the standards. Systematic professional development will support all educators to adapt, modify, or replace the CCSS based on the needs of the learner. To differentiate effectively for gifted and high-potential learners, all educators need to develop expertise at *designing learning experiences and assessments that are conceptually advanced, challenging, and complex.*

Professional development for implementing the CCSS for gifted and high-potential learners should focus on evidence-based differentiation practices as they relate to specific core content. The training should demonstrate how to apply acceleration strategies, how to add depth and complexity elements, such as critical thinking, creative thinking, problem solving, and inquiry, and how to develop and encourage creativity, all within the CCSS. In addition to the curriculum adaptation and modification, the professional development experiences should also demonstrate content-specific ways to design and implement differentiated product-based assessments as well as pre- and post-assessments appropriate for advanced students.

## Developing a Common Core Implementation Timeline

### What is a possible timeline for implementing the Common Core State Standards locally?

Implementation of the Common Core State Standards (CCSS) at the K-12 level encompasses several varied but necessary tasks. For example, in Mathematics, both the Standards for Mathematical Practice addressing process and proficiencies and the Standards for Mathematical Content must be taken together as a way in which we can develop mathematical practitioners and mathematical expertise, not just proficient math students. A first step towards implementation is to become familiar with both sets of standards. Next, look at current practices, analyzing them to determine if there are gaps between current practices and practices that would reflect the CCSS. Where gaps have been identified, adjust content, process, products, and assessments to reflect the new Mathematics standards, bearing in mind that student outcomes should be aimed at developing expertise. Gather resources and consult with content specialists and gifted education specialists to assist with realignment. Provide professional development to ensure school personnel understand the new Standards and the changes needed to implement them for gifted and talented and high-potential students.

A sample timeline for implementation of the CCSS in Mathematics:

Task	Person(s) Responsible	When
Know and understand the CCSS in Mathematics.	All school personnel	August -September
Gather evidence to determine the extent to which current practices reflect the practice standards; identify gaps in practice and or content.	Teacher representatives at each grade level, building level administer, gifted specialist	October-December
Gather evidence to determine the extent to which current content reflects the content standards; identify gaps in practice and or content.	Teacher representatives at each grade level, building level administer, gifted specialist, math specialist	October-December
Make adjustment to practices and content to reflect gaps that were identified.	All teachers	January-March
Gather resources and assist with realignment.	GT coordinator, building administrator, math specialist, & other necessary personnel	January-March
Provide professional development to prepare all teachers for full implementation of the CCSS for gifted and high-potential students.	GT coordinator, building administrator, math specialist, & other necessary personnel	April-July
Provide ongoing support for full implementation.	GT coordinator, building administrator, math specialist, & other necessary personnel	August-July

## Additional Resources

### What resources are available to assist with the implementation process?

There are a variety of resources that can assist university personnel, administrators, and coordinators of gifted programs at state and local levels in implementing the new CCSS for gifted learners, including assessments that measure the depth and breadth of a student's knowledge within a domain of talent development; curriculum units of study that are already differentiated and research-based; instructional strategies that employ the use of higher-order thinking skills; and programming options that include acceleration, enrichment, and extended learning beyond the classroom.

The new NAGC [Pre-K-Grade 12 Gifted Programming Standards](#) should be used as a tool to understand the elements that a differentiated curriculum for the gifted learner would include. For university personnel, it would be helpful to review the [gifted education teacher preparation standards](#) to see the extent to which there is alignment to the new CCSS.

Below is a sampling of resources that might be considered in implementing the CCSS with gifted students.

#### Assessment

Assessments for measuring the progress of gifted and talented students may be found in the *NAGC Pre-K-Grade 12 Gifted Education Programming Standards: A Guide to Planning and Implementing High-Quality Services* (Johnsen, 2012). Sulak and Johnsen (2012) describe informal assessments that might be available without charge and used informally in assessing student outcomes in creativity, critical thinking, curriculum, interests, learning and motivation, and social/emotional areas. They also have identified specific product and performance assessments and other assessments that might be useful in program planning and evaluation. While many of the assessments do not have technical information, 23 do provide either reliability or validity information.

Johnsen, S. K. (Ed.). (2012). *NAGC Pre-K-Grade 12 gifted education programming standards: A guide to planning and implementing high-quality services*. Waco, TX: Prufrock Press.

Sulak, T. N., & Johnsen, S. K. (2012). Assessments for measuring student outcomes. In S. K. Johnsen (2012). *NAGC Pre-K-Grade 12 gifted education programming standards: A guide to planning and implementing high-quality services* (pp. 283-306). Waco, TX: Prufrock Press.

The Partnership for Assessment of Readiness for College and Careers (PARCC) is a 24-state consortium that has been formed to develop a common assessment system to measure the CCSS. To learn more about their work and the progress of their assessment development, visit <http://www.parcconline.org/about-parcc>

Smarter Balanced Assessment Consortium is a state-led consortium working to develop assessments that are aligned to the CCSS. The web-based resources include the alignment of the CCSS to International Baccalaureate, the Texas College Career Readiness Standards, depth of knowledge and breadth of coverage within a domain. To learn more about the consortium, alignments with other standards, and their progress on developing assessments for the standards, visit <http://educationnorthwest.org/resource/1331> and <http://www.k12.wa.us/SMARTER/Resources.aspx>

Information regarding standardized achievement tests may be found in *Identifying Gifted Students: A Practical Guide* (Robins & Jolly, 2011). In their chapter, Robins and Jolly provide a list of 28 instruments that are frequently used in the identification of gifted students and their technical qualities. Since many of these assessments are also used to identify students who are above grade level in specific academic areas, they would be appropriate for measuring a gifted student's academic progress.

Robins, J. A., & Jolly, J. L. (2011). Technical information regarding assessment. In S. K. Johnsen (Ed.), *Identifying gifted students: A practical guide* (2<sup>nd</sup> ed., pp. 75-188). Waco, TX: Prufrock Press.

#### Curriculum and Instructional Strategies

Carnegie Mellon Institute for Talented Elementary and Secondary Students (C-MITES) offers resources/links to curriculum in mathematics, science, technology, engineering, language arts, and social studies. For more information, visit <http://www.cmu.edu/cmities/parents.html>

The Center for Gifted Education at the College of William & Mary has designed curricular units in the areas of Mathematics, Language Arts, Science, and Social Studies that are based on the three dimensions of the Integrated Curriculum Model: advanced content, higher level processes and products, and interdisciplinary concepts, issues, and themes. The materials emphasize a sophistication of ideas, opportunities for extensions, the use of higher-order thinking skills, and opportunities for student exploration based on interest. Specific teaching strategies are also described on the website including literature webs, the hamburger model for persuasive writing, vocabulary web, the use of Paul's Elements of Reasoning, analyzing primary sources, and a research model for students.

For more information about the units, visit the Center for Gifted Education at <http://education.wm.edu/centers/cfge/curriculum/index.php>

The Davidson Institute for Talent Development offers links to resources in Mathematics, Language Arts, Science, Social Studies, Arts and culture, and related domains. It also provides links to information about educational options such as ability grouping, acceleration, enrichment programs, competitions, and other services. To explore these resources, visit [http://www.davidsongifted.org/db/browse\\_by\\_topic\\_resources.aspx](http://www.davidsongifted.org/db/browse_by_topic_resources.aspx)

The Illinois State Board of Education provides educator resources, which include progressions in Mathematics, lesson examples, and links to other resources. To access these resources, visit [http://www.isbe.net/common\\_core/htmls/resources.htm](http://www.isbe.net/common_core/htmls/resources.htm)

Indiana Department of Education has developed presentations on the CCSS, which includes "Using the Common Core Standards to Deliver High Ability Curriculum." To access this presentation and others related to the CCSS, visit <http://www.doe.in.gov/commoncore/>

The Maine Department of Education provides resources for implementing the CCSS for Language Arts, which includes performance tasks and examples of student writing. For implementing the CCSS for Mathematics, they have developed three modules that provide an overview, alignment with other standards, and professional development modules. To access these resources, visit <http://www.maine.gov/education/lres/commoncore/index.html>

The Neag Center for Gifted Education and Talent Development offer online resources that describe research studies and defensible practices in the field of gifted and talented education. Some of the studies address curriculum at the high school level, the explicit teaching of thinking skills, cluster grouping, algebraic understanding, reading with young children, differentiated performance assessments, and content-based curriculum. To access the studies, visit <http://www.gifted.uconn.edu/nrcqt/nrconlin.html>

Project M<sup>2</sup> provides differentiated units in Mathematics for grades K-2 that focus on geometry or measurement at the primary level and engage students in critical and creative thinking and problem solving. For more information regarding the project, visit the University of Connecticut at <http://web2.uconn.edu/projectm2/about.html>

### **Gifted Education Programming**

*A Nation Deceived: How Schools Hold Back America's Brightest Students.* Templeton National Report on Acceleration by Colangelo, Assouline, and Gross is a two-part report that provides research-based information about acceleration and examines current practices. To download the entire report, visit [http://www.accelerationinstitute.org/Nation\\_Deceived/Get\\_Report.aspx](http://www.accelerationinstitute.org/Nation_Deceived/Get_Report.aspx)

The Colorado Department of Education provides *Gifted Education Guidelines and Resources* in programming for gifted and talented students that describe differentiated instruction for gifted learners (e.g., acceleration, content extension, higher order thinking skills); content options to address identified areas of strength, advanced learning plans, and acceleration tables. To retrieve the resources, visit <http://www.cde.state.co.us/gt/resources.htm>

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